

**REMARKS**

The Final Office Action dated October 8, 2003 has been reviewed and the comments of the Office Action have been considered. Claims 1, 3, 8, 9, and 12 have been amended, and claims 5, 6, and 10 have been canceled without prejudice or disclaimer to expedite prosecution of the application, or in the alternative, to place the claims in better form for appeal. Accordingly reconsideration of claims 1-4, 7-9, and 11-17 is requested.

The drawings stand object to under 37 C.F.R. § 1.83(a) as failing to show a swirl generator disk and guide disk as recited in claims 5 and 10. Applicant respectfully notes that the swirl and guide disks are shown in the originally filed Figures 1 and 2, and described at page 4, lines 27-29 and page 5, lines 1-3. However, in order to advance prosecution, applicant has canceled claims to these features, thereby obviating this objection.

Claims 5, 6, and 10 stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to provide a disclosure that would enable one skilled in the art to make or use the claimed invention. Applicant respectfully submits that the originally filed disclosure is enabling for the claimed invention as a whole. The claimed invention recites a swirl disk and a guide disk. One skilled in the art would realize—without any undue experimentation—that any type of disk that permits fuel to be swirled in the seat passage, as described at page 4, line 27-29, would allow such person to make or use the claimed invention. Further, such person would realize—without any undue experimentation—that any type of disk that supports a reciprocating needle, as described at page 5, lines 1-3, would allow such person to make or use the claimed invention. *See*, “Test of Enablement” in MPEP § 2164.01, page 2100-174, (8<sup>th</sup> Ed., August 2001). Thus, one skilled in the art would be able to make and use the claimed invention as a whole based on the originally filed disclosure without any undue experimentation, and therefore, the originally filed disclosure is enabling for the claimed invention as a whole. However, in an effort to expedite prosecution of this application, applicant has canceled claims 5, 6, and 10, thereby obviating this rejection. But applicant respectfully reiterates that claims 5, 6, and 10, as originally filed, are enabled by the originally filed disclosure. Accordingly, this objection should be withdrawn.

Claims 1-17 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The ground for rejection under 35 U.S.C. § 112, first paragraph, (i.e., written description) with respect to the invention as a whole as recited in the pending claims,

appears to have been based on an erroneous conclusion that the originally filed specification failed to convey that the inventor had possession of a fuel injector that has a seat disposed "within" a body of the fuel injector. Specifically, the Examiner has imported modifiers "completely" and "partially" to the claimed term "within" to reach the conclusion that applicant did not possess the claimed invention as a whole.

Applicant asserts that the inventor, at the time of filing of this application, did possess the claimed invention as a whole, which includes, *inter alia*, a seat disposed within a body. Applicant submits that the originally filed specification supports applicant's assertion. The specification, as shown in a preferred embodiment illustrated in Figure 2, the seat 64 is disposed within the body 52. Therefore, the originally filed specification clearly supports that the seat, in a preferred embodiment, is disposed within a body, and unequivocally conveys that the inventor did possess the claimed invention as a whole. In an effort to advance prosecution, however, applicant has amended claims 1, 8, and 12 to particularly point out and distinctly claim that a funnel of the seat has a conical end disposed within the body. Support for this amendment is provided in the originally filed application in, for example, Figures 1 and 2 and at page 4, lines 26 and 27, wherein it is stated that "a conical end 80 of a funnel 82" is provided so that the funnel 82 serves as a seat passage 70 of seat 64. Accordingly, this rejection should be withdrawn.

Applicant respectfully submits that the above amendment to the claims should be entered because the amendment would clarify the issue raised by the Examiner under 35 U.S.C. 112, first paragraph, so as to place the claims in better form for appeal. Furthermore, upon entry of the proposed amendment, applicant submits that the claims are patentable over the relied upon art for the reasons set forth below.

Claims 1-4, 8, 9, and 11-16 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Hans *et al* ("Hans"). Claims 7 and 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over "Hans" in view of Daly *et al* ("Daly"). Insofar as the rejection is applicable to amended claims 1, 8, and 12, applicant respectfully traverses the rejection because Hans or Daly, whether considered alone or in combination, fails to teach or suggest the claimed invention as a whole.

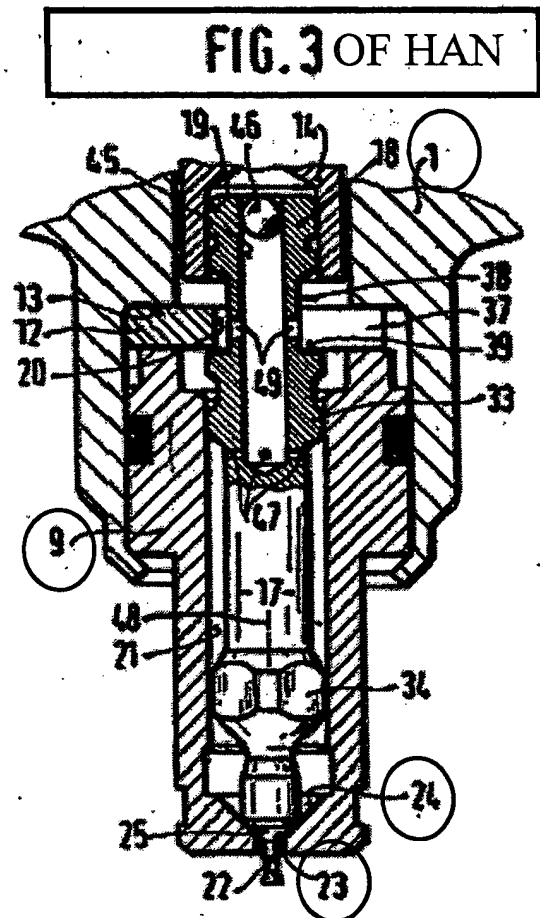
Each of claims 1 and 8 has been amended to recite, respectively, a fuel injector and a body and seat that includes, *inter alia*, a body and seat. The seat defines a funnel, which has a conical end disposed within the body. The seat includes an intermediate zone contiguously engaging an inner

surface of a neck portion of the body. And the inner surface is located between the conical end of the funnel and a fuel outlet of the fuel injector.

Amended claim 12 recites a method of forming a fuel injector. The fuel injector includes a body and seat. The seat defines a funnel, which has a conical end disposed within the body. The method can be achieved, in part, by contiguously engaging the intermediate zone of the seat with an inner surface of the neck portion of the body, the inner surface located between the conical end of the funnel and the fuel outlet. Support for the amendment to claims 1, 8, and 12 is provided in the originally filed application at, for example, page 5, lines 14-28, page 6, lines 1-2, page 4, lines 24-26 and in Figure 2.

In contrast, Hans shows and describes, in Figure 3 (reproduced at right) a valve housing 1 (as circled) partially surrounding nozzle body 9 (as circled). The nozzle body 9 has a portion surrounded by housing 1 and an injection opening 23 (as circled) that extends outside valve housing 1. A conical valve seat surface 24 (as circled) of the nozzle 9 is disposed on a portion outside the housing 1 instead of within the housing 1. The inner surface of the housing 1, however, is located between the armature and the conical valve seat face 24 of the injection opening 23 instead of between the conical valve seat face 24 and the injection opening 23. Because Hans shows and describes the surface of the seat in contiguous engagement with the housing 1 at an entirely different location than as recited in the claims, applicant respectfully submits that Hans fails to show or describe at least these features. Accordingly, claims 1, 8, and 12 are patentable because Hans fails to teach or suggest the claimed invention as a whole.

Notwithstanding the deficiencies in Han, the Examiner relies upon the teaching of Daly in combination with Hans in an attempt to render the claimed invention as a whole, as recited in dependent claims 7 and 17, obvious. Daly, however, fails to cure the deficiencies of Hans, especially



in view of the illustration and description of Daly being drawn to a throttle body rather than a fuel injector. Accordingly, claims 7 and 17 are patentable because the proposed combination of Hans in view of Daly fails to teach or suggest the claimed invention as a whole.

Claims 2-4, 7, 9, 11, and 13-17, which depend ultimately from one of allowable claims 1, 8, or 12, are allowable for at least the same reasons, as well as for reciting additional features.

Accordingly, claims 1-4, 7-9, and 11-17 are in condition for allowance.

Applicant respectfully requests entry of this amendment because the amendment places the application in condition for allowance or in better form for appeal. Furthermore, no new claim or new matter has been added. Accordingly, applicant request sentry of the amendment and prompt allowance of the application. If there are any questions regarding the application, the examiner is respectfully requested to contact the undersigned representative to expedite prosecution of the application.

EXCEPT for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 50-0310. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

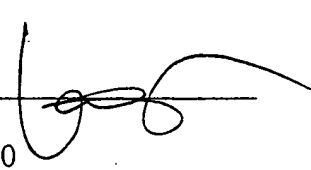
Respectfully submitted,

**MORGAN, LEWIS & BOCKIUS LLP**

Date: April 7, 2004

By: \_\_\_\_\_

Khoi Q. Ta  
Reg. No. 47,300



**Customer No. 009629**

**MORGAN, LEWIS & BOCKIUS LLP**

1111 Pennsylvania Avenue, N.W.

Washington, D.C. 20036

Telephone: (202) 739-5203

Facsimile: (202) 739-3001